WHAT I CLAIM IS:

CLAIM 1. A system for optimally allocating resources comprising:

5   a computer having at least one processor, means for data input and output, and memory means for storing data and executable programs;

said memory means comprising a first memory portion storing a plurality of scenarios;

10   a second memory portion storing an executable program means for loading said first memory portion;

a third memory portion for storing a plurality of *XAlloc* objects;

15   a fourth memory portion storing an executable program means for allocating resources within each said scenario stored in said first memory portion;

a fifth memory portion storing an executable program means for evaluating an allocation contained in an *XAlloc* object against one or more scenarios of said first memory portion;

20   a sixth memory portion for storing an executable program means for calling executable program means of said second, fourth, and fifth memory portions and for performing executable program means on said first and third memory portions to optimally allocate said resources.

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CLAIM 2. The system for optimally allocating resources according to Claim 1, wherein said sixth memory portion further comprises an executable program means for clustering said scenarios of said first memory portion; said first memory portion further comprises a means for

storing said clusters; said sixth memory portion further comprises an executable program means for utilizing said clusters to optimally allocate said resources.

5   CLAIM 3. The system for optimally allocating resources according to Claim 1, wherein said sixth memory portion further comprises at least one of the following executable program means: *SimpleParabolaSearch, InnerCompressSearch, OuterCompressSearch, GeneticSearch* for combining *XAlloc* objects to form new *XAlloc* objects; said sixth memory portion causing only preferable said new *XAlloc* objects to be stored in said memory portion three.

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CLAIM 4. The system for optimally allocating resources according to Claim 1, wherein said sixth memory portion further comprises at least one of the following executable program means: *StandardSearch, MiscSearch* for generating *XAlloc* objects; said sixth memory portion causing

15   only preferable said generated *XAlloc* objects to be stored in said memory portion three.

CLAIM 5. The system for optimally allocating resources according to Claim 1, wherein said sixth memory portion further comprises an executable program means for generating Guiding

20   Beacon Scenarios; said fifth memory portion further comprising means for using said generated Guiding Beacon Scenarios.

CLAIM 6. The system for optimally allocating resources according to Claim 5, wherein said

25   executable program means for generating Guiding Beacon Scenarios further includes means for generating at least one of the following types of Guiding Beacon Scenarios: Contingent, Merged, and Multiple; said means for using said generated Guiding Beacon Scenarios further includes means for using the Guiding Beacon Scenarios generated by said means for generating Guiding Beacon Scenarios.

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CLAIM 7. The method for optimally allocating resources according to Claim 6, wherein, at least one of the following:

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A) said sixth memory portion further stores an executable program means for clustering said scenarios of said first memory portion; said first memory portion further stores said clusters; said sixth memory portion further stores an executable program means for utilizing said clusters to optimally allocate said resources;

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B) said sixth memory portion further stores at least one of the following executable program means: *SimpleParabolaSearch*, *InnerCompressSearch*, *OuterCompressSearch*, *GeneticSearch* for combining *XAlloc* objects to form new *XAlloc* objects; said sixth memory portion causing only preferable said new *XAlloc* objects to be stored in said memory portion three;

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C) said sixth memory portion further stores at least one of the following executable program means: *StandardSearch, MiscSearch* for generating *XAlloc* objects; said sixth memory portion causing only preferable said generated *XAlloc* objects to be stored in said memory portion three.

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CLAIM 8. The method for optimally allocating resources according to Claim 1, wherein said method comprises at least two of the following:

A) said sixth memory portion further stores an executable program means for clustering said scenarios of said first memory portion; said first memory portion further stores said clusters; said sixth memory portion further stores an executable program means for utilizing said clusters to optimally allocate said resources;

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B) said sixth memory portion further stores at least one of the following executable program means: *SimpleParabolaSearch*, *InnerCompressSearch*, *OuterCompressSearch*,

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GeneticSearch for combining *XAlloc* objects to form new *XAlloc* objects; said sixth memory portion causing only preferable said new *XAlloc* objects to be stored in said memory portion three;

5   C) said sixth memory portion further stores at least one of the following executable program means: *StandardSearch, MiscSearch* for generating *XAlloc* objects; said sixth memory portion causing only preferable said generated *XAlloc* objects to be stored in said memory portion three.

10   D) said sixth memory portion further stores an executable program means for generating Guiding Beacon Scenarios; said fifth memory portion further stores means for using said generated Guiding Beacon Scenarios.

CLAIM 9. A method for optimally allocating resources, utilizing a computer having at least one processor, means for data input and output, and memory means for storing data and executable programs; said method comprising:

5   storing a plurality of scenarios in a first portion of said memory means;

       storing in a second portion of said memory means an executable program means for loading said first memory portion;

10   storing *XAlloc* objects in a third portion of said memory means;

       storing in a fourth portion of said memory means an executable program means for allocating resources within each said scenario stored in said first memory portion;

15   storing in a fifth portion of said memory means an executable program means for evaluating an allocation contained in an *XAlloc* object against one or more scenarios of said first memory portion;

       storing in a sixth portion of said memory means an executable program means for calling
20   executable program means of said second, fourth, and fifth memory portions and for performing executable program means on said first and third memory portions to optimally allocate said resources.

25   CLAIM 10. The method for optimally allocating resources according to Claim 9, wherein said sixth memory portion further stores an executable program means for clustering said scenarios of said first memory portion; said first memory portion further stores said clusters; said sixth memory portion further stores an executable program means for utilizing said clusters to optimally allocate said resources.

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CLAIM 11. The method for optimally allocating resources according to Claim 9, wherein said sixth memory portion further stores at least one of the following executable program means: *SimpleParabolaSearch, InnerCompressSearch, OuterCompressSearch, GeneticSearch* for combining *XAlloc* objects to form new *XAlloc* objects; said sixth memory portion causing only preferable said new *XAlloc* objects to be stored in said memory portion three.

CLAIM 12. The method for optimally allocating resources according to Claim 9, wherein said sixth memory portion further stores at least one of the following executable program means: *StandardSearch, MiscSearch* for generating *XAlloc* objects; said sixth memory portion causing only preferable said generated *XAlloc* objects to be stored in said memory portion three.

CLAIM 13. The method for optimally allocating resources according to Claim 9, wherein said sixth memory portion further stores an executable program means for generating Guiding Beacon Scenarios; said fifth memory portion further stores means for using said generated Guiding Beacon Scenarios.

CLAIM 14. The method for optimally allocating resources according to Claim 13, wherein said executable program means for generating Guiding Beacon Scenarios further includes means for generating at least one of the following types of Guiding Beacon Scenarios: Contingent, Merged, and Multiple; said means for using said generated Guiding Beacon Scenarios further including means for using the Guiding Beacon Scenarios generated by said means for generating Guiding Beacon Scenarios.

CLAIM 15. The method for optimally allocating resources according to Claim 14, wherein, at least one of the following:

A) said sixth memory portion further stores an executable program means for clustering said scenarios of said first memory portion; said first memory portion further stores said clusters; said sixth memory portion further stores an executable program means for utilizing said clusters to optimally allocate said resources.

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B) said sixth memory portion further stores at least one of the following executable program means: *SimpleParabolaSearch*, *InnerCompressSearch*, *OuterCompressSearch*, *GeneticSearch* for combining *XAlloc* objects to form new *XAlloc* objects; said sixth memory portion causing only preferable said new *XAlloc* objects to be stored in said

10   memory portion three.

C) said sixth memory portion further stores at least one of the following executable program means: *StandardSearch*, *MiscSearch* for generating *XAlloc* objects; said sixth memory portion causing only preferable said generated *XAlloc* objects to be stored in said memory

15   portion three.

CLAIM 16. The method for optimally allocating resources according to Claim 9, wherein, at least two of the following:

20   A) said sixth memory portion further stores an executable program means for clustering said scenarios of said first memory portion; said first memory portion further stores said clusters; said sixth memory portion further stores an executable program means for utilizing said clusters to optimally allocate said resources.

25   B) said sixth memory portion further stores at least one of the following executable program means: *SimpleParabolaSearch*, *InnerCompressSearch*, *OuterCompressSearch*, *GeneticSearch* for combining *XAlloc* objects to form new *XAlloc* objects; said sixth memory portion causing only preferable said new *XAlloc* objects to be stored in said memory portion three.

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C) said sixth memory portion further stores at least one of the following executable program means: *StandardSearch, MiscSearch* for generating *XAlloc* objects; said sixth memory portion causing only preferable said generated *XAlloc* objects to be stored in said memory portion three.

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D) said sixth memory portion further stores an executable program means for generating Guiding Beacon Scenarios; said fifth memory portion further stores means for using said generated Guiding Beacon Scenarios.

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